



MARKETING OHIO GRAPES

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# MARKETING OHIO GRAPES

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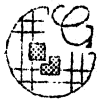


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### Section 1 - Acreage and Production



rape growers in Ohio are confronted with market conditions which during the next few years at least are pretty certain to be unfavorable, barring an unpredictable increase in demand or prices. The United States Department of Agriculture reports <sup>1</sup> that "there is already in the country as a whole, ample acreage of wine, raisin and table varieties to take care of any increase in demand that is likely to take place in the next 5 years. Potential supplies from the present acreage in years of normal crops are likely to prove burdensome, and it is not probable that new plantings will be necessary, except for replacement purposes, for several years to come."

Though Ohio's crop is sold mainly in Ohio cities, and production in Ohio is not large enough to supply more than a small part of the demand within the state, nevertheless conditions prevailing in these markets are governed to only a small degree by the Ohio crop. This state produces only about one per cent (1%) of the total grape crop of the United States. This small proportion obviously can exert little influence upon the grape market. Almost ninety per cent (90%) of the total United States crop is produced in the state of California, mainly under irrigation. Controlled water supply and other favorable growing conditions result in fairly constant annual yields through avoidance of drouth, freezing, etc.

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<sup>1</sup> U. S. D. A. Miscellaneous Publication 215, November, 1934 - "The Agricultural Outlook for 1935."

Table 1 - Grape Production in the United States <sup>/2</sup>  
1926 - 1934

| State        | 5 year<br>average<br>production<br>1926-30<br>(tons) | Actual Production |                |                |                | Pct. of Total<br>Average |                |
|--------------|--|-------------------|----------------|----------------|----------------|--------------------------|----------------|
|              |  | 1931<br>(tons)    | 1932<br>(tons) | 1933<br>(tons) | 1934<br>(tons) | 1926-30<br>(pct.)        | 1934<br>(pct.) |
| California   | 2,182,000  | 1,320,000         | 1,926,000      | 1,660,000      | 1,544,000      | 89.2                     | 87.0           |
| New York     | 79,296   | 97,378            | 67,971         | 64,800         | 49,400         | 3.2                      | 2.8            |
| Michigan     | 61,888   | 57,270            | 71,220         | 58,562         | 61,145         | 2.5                      | 3.4            |
| Ohio         | 23,784   | 31,000            | 30,705         | 27,412         | 22,720         | 1.0                      | 1.3            |
| Pennsylvania | 21,344   | 30,600            | 22,977         | 17,808         | 18,981         | .9                       | 1.1            |
| Missouri     | 9,996  | 10,400            | 9,717          | 9,830          | 7,540          | .4                       | .4             |
| Arkansas     | 9,443  | 10,440            | 12,936         | 12,120         | 16,640         | .4                       | .9             |
| All Others   | 58,903   | 67,749            | 62,232         | 58,999         | 54,742         | 2.4                      | 3.1            |
| Total        | 2,446,654  | 1,621,837         | 2,203,758      | 1,909,581      | 1,775,168      | 100.0                    | 100.0          |

<sup>/2</sup> U. S. Bureau of Agricultural Economics

A large part of the California crop is grown primarily for raisin and wine purposes. Many of the varieties used for these purposes, however, are adapted for fresh table use, and whenever the price of table grapes is such as to make it more profitable to ship these varieties as table stock, many carloads of them are sent east and thus diverted from raisin and wine channels. This potential supply therefore hangs continuously as a threat over the market for table grapes. The entire supply grown in California, as well as in other states, thus influences the price of Ohio grapes. It is fallacious to eliminate the supply of wine and raisin grapes from consideration in attempting to measure the effect of the supply on the price received by Ohio farmers.

The crop grown in this state is used primarily for making wine and unfermented grape juice and for consumption as fresh fruit. The United States Department of Agriculture states <sup>/3</sup> further:

"During the last decade the volumes of grapes marketed fresh had necessarily increased considerably, but the decline in purchasing power during the depression brought about a decrease in demand and drastic declines in prices. With the repeal of the eighteenth amendment, a considerable portion of grapes heretofore marketed for fresh use apparently has been diverted to the manufacture of wine.

<sup>/3</sup> U. S. D. A. Misc. Pub. 215

"Prior to the enactment of the eighteenth amendment, 1915-19, consumption of wines in the United States averaged about 46,000,000 gallons per year, or somewhat lower than during the pre-war years, 1910-14, when it averaged about 57,000,000 gallons. Imports from foreign countries made up from 5,000,000 to 7,000,000 gallons of these quantities. On a per capita basis consumption has never exceeded 0.67 gallon during the last 30 years and in normal times averaged about 0.6 gallon. It is estimated that about 30 per cent of the 1934 production of all grapes in the United States would produce enough wine to satisfy pre-prohibition per capita requirement. In 1934 the production of wine varieties in California alone makes up about 80 per cent of this requirement. During the 4 years beginning July 1, 1928 and ended June 30, 1932, an average of about 6,266,000 gallons of wine was produced. For the year 1932-33 the production increased three times and reached 18,756,000 gallons. In 1933-34 it was increased about 10 times the 1928-32 average to 61,000,000 gallons. Production in the latter year was augmented by importations amounting to about 3,151,000 gallons. Stocks of wine on hand in bonded warehouses on July 1, averaged 21,112,000 gallons for the 5 years 1928-32 and are estimated to have reached between 55,000,000 and 60,000,000 gallons by July 1, 1934. These figures on stocks and production of wine include also wine to be used for distilling purposes, and no allowance is made for evaporation and waste loss. It is indicated from production and stocks that about 25,541,000 gallons moved out of bonded warehouses during 1933-34, some of which went to build up stocks in wholesale and retail stores."

The effect upon prices to farmers of this great increase in visible and potential supply of wine resulting from diversions of grapes from table to wine use cannot yet be measured. Certainly the likelihood of increased prices for table grapes is slight, for the supply continues to exceed the demand. No material change in demand has occurred in the last year or two, and none can be foreseen at this time.

The U. S. Department of Agriculture publication <sup>4</sup> previously cited reports further that

"The number of grape vines of all ages and varieties in the United States decreased about 8 per cent during the 10-year period 1910-20, but increased 45 per cent from 1920 to 1930. The Bureau of the Census reported that there were 366,844,000 vines of all ages in the country as a whole in 1930, of which number 342,191,000 were of bearing age and about 24,653,000 were non-bearing. Since 1930 there has been considerable neglect and some abandonment of vineyards, especially in California. The repeal of the prohibition amendment has changed this tendency to some extent, but there have been few new plantings except of sweet wine and other desirable wine varieties in California, and the number of vines now in vineyards has undoubtedly declined slightly.

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<sup>4</sup> U. S. D. A. Misc. Pub. 215

"The 1934 drought and the 1933-34 winter damage, although affecting the producing capacity of the 1935 crop, will not be sufficient to lower materially the national total production capacity. A survey in New York shows that 9.4 per cent of the vines of bearing age were killed and 30.2 per cent were injured; and 6.5 per cent of the vines not of bearing age were killed and 14.7 per cent were injured by the severe weather in the winter of 1933-34. Such varieties as Catawba, Niagara, and Delaware suffered the greatest damage. It is expected that new and replacement plantings will largely offset the reduced acreage caused by drought and winter killing.

"In California, where approximately 70 per cent of the grape acreage is located, the number of bearing grape vines increased steadily during the two decades ended in 1928. Since 1928 there has been a steady decline and in 1934 the bearing acreage was about 18 per cent below the 1928 peak. From 1919 to 1928 the bearing acreage of all varieties in California almost doubled, rising from 322,000 to 628,000 acres, but has since declined to 514,100 acres in 1934. Since 1927 the non-bearing acreage of all varieties has dropped off sharply, from 40,700 acres to only 1,600 acres as of January 1, 1934.

"The California bearing acreage of wine grapes increased steadily from 97,000 acres in 1919 to 194,000 acres in 1928, but declined to 185,000 acres in 1932. It increased slightly to 187,000 in 1933 and remained stationary during 1934. Since 1927 the non-bearing acreage of wine-grape varieties has declined steadily from 33,900 acres to only 600 acres in 1933 and increased slightly to 800 acres as of January 1, 1934.

"The California bearing acreage of raisin grapes increased from 170,000 acres in 1919 to 352,000 acres in 1926, but has since declined to 232,500 acres in 1934. Very few raisin grapes have been planted in California during the last few years. In 1927 only 2,000 acres were of non-bearing age and by January 1, 1934 the acreage had decreased to only 100 acres.

"In 1919 the bearing acreage of table grapes in California totaled 55,000 acres. It increased to 144,000 acres in 1926, but has declined steadily to 93,800 acres in 1934. The non-bearing acreage of table-grape varieties declined from 4,800 acres in 1927 to only 700 acres in 1934, excluding 1934 plantings.

"In the remainder of the United States the total number of grape vines increased 39 per cent from 1920 to 1930, when it was probably at a record peak of 109,000,000 vines. Of this total, about 100,000,000 were of bearing age and 9,000,000 were non-bearing. Because of the low prices received for all varieties of grapes during the last few years and in view of the downward trend of acreage in California and winter loss in New York, it is probable that there has been a decrease in vineyards in these States since 1930.

Grapes are produced on about 112,000 farms in Ohio. The crop is grown to some extent in practically every county of the state, but commercial production is limited almost wholly to north central and northeastern Ohio, in six counties bordering Lake Erie and in two or three others. Figure 1 shows the location of plantings by counties as reported in the 1930 census.

Table 2 - Grape Vines of all Ages in Ohio, 1930 <sup>/5</sup>.

| County     | No. of vines | County     | No. of vines | County     | No. of vines |
|------------|--------------|------------|--------------|------------|--------------|
| Adams      | 2,995        | Hamilton   | 54,171       | Noble      | 2,632        |
| Allon      | 21,136       | Hancock    | 7,535        | Ottawa     | 804,394      |
| Ashland    | 9,881        | Hardin     | 5,104        | Paulding   | 6,277        |
| Ashtabula  | 2,105,742    | Harrison   | 3,696        | Perry      | 5,748        |
| Athens     | 4,541        | Henry      | 15,564       | Pickaway   | 2,786        |
| Auglaize   | 6,867        | Highland   | 2,025        | Pike       | 1,832        |
| Belmont    | 28,727       | Hocking    | 4,101        | Portage    | 80,194       |
| Brown      | 5,017        | Holmes     | 8,224        | Preble     | 7,037        |
| Butler     | 9,163        | Huron      | 26,968       | Putnam     | 8,585        |
| Carroll    | 10,275       | Jackson    | 924          | Richland   | 11,663       |
| Champaign  | 3,504        | Jefferson  | 8,266        | Ross       | 15,349       |
| Clark      | 3,300        | Knox       | 2,538        | Sandusky   | 38,977       |
| Clermont   | 21,899       | Lake       | 1,286,601    | Scioto     | 9,229        |
| Clinton    | 2,400        | Lawrence   | 7,709        | Seneca     | 13,553       |
| Columbiana | 41,008       | Licking    | 10,306       | Shelby     | 6,916        |
| Coshocton  | 9,233        | Logan      | 4,257        | Stark      | 46,775       |
| Crawford   | 18,925       | Lorain     | 1,536,596    | Summit     | 118,196      |
| Cuyahoga   | 1,091,953    | Lucas      | 225,488      | Trumbull   | 70,349       |
| Darke      | 6,144        | Madison    | 1,548        | Tuscarawas | 18,838       |
| Defiance   | 8,201        | Mahoning   | 54,330       | Union      | 4,831        |
| Delaware   | 7,575        | Marion     | 6,094        | Van Wert   | 7,037        |
| Eric       | 771,649      | Medina     | 210,316      | Vinton     | 1,140        |
| Fairfield  | 13,865       | Meigs      | 3,143        | Warren     | 3,843        |
| Fayette    | 1,215        | Mercer     | 20,385       | Washington | 5,138        |
| Franklin   | 39,032       | Miami      | 5,230        | Wayne      | 59,391       |
| Fulton     | 29,060       | Monroe     | 8,358        | Williams   | 7,821        |
| Gallia     | 2,605        | Montgomery | 18,690       | Wood       | 42,102       |
| Geauga     | 296,420      | Morgan     | 3,083        | Wyandot    | 6,717        |
| Greene     | 3,356        | Morrow     | 2,912        |            |              |
| Guernsey   | 5,339        | Muskingum  | 15,283       | Total      | 9,552,922    |

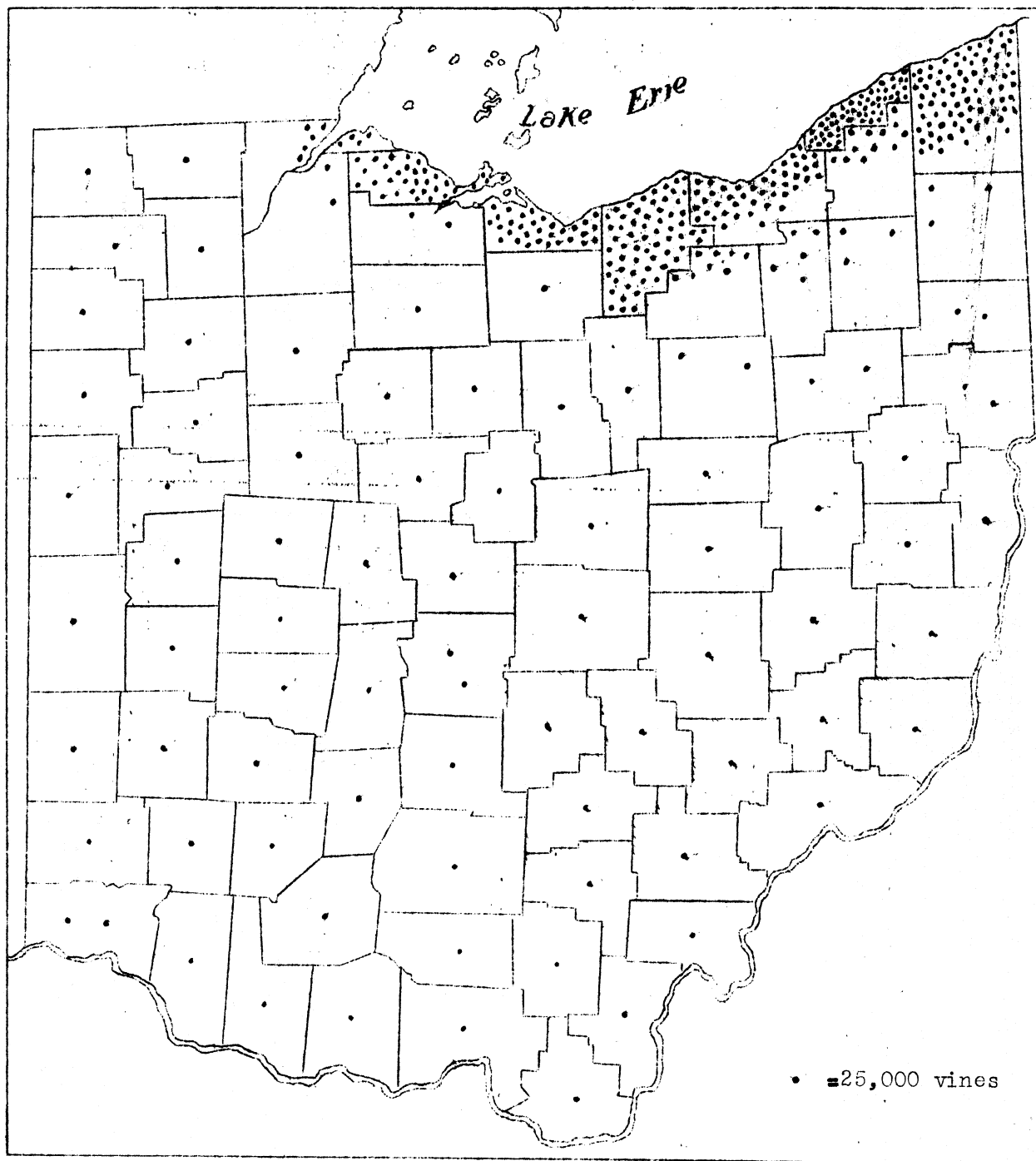


Figure 1 - Grape Vines of all Ages, 1930



## Section 2 - Carlot Shipments and Unloads

Since 1928 carlot shipments of grapes in the United States have declined abruptly. Movement by rail was only two-fifths as large in 1933 and 1934 as it was in 1927 and 1928. Decreasing purchasing power during the depression years was accompanied by a steady and rapid decline in shipments, and upon repeal of prohibition the decline was accentuated. Apparently large quantities of grapes shipped fresh to distant markets during the prohibition period were diverted by truck to wineries located in producing areas after repeal of the eighteenth amendment.

Unfortunately records of truck movement are not available. It is known, however, that motor trucks during recent years have been gradually displacing railroads on relatively short hauls, and this doubtless is responsible in part also for the decline in shipments by rail.

Table 3 - Carlot Shipments of Grapes, 1927-1934

| Year | Total United States Shipments<br>(Carlots) | (Index, 1927=100) | Shipments from Ohio<br>(Carlots) |
|------|--|-------------------|----------------------------------|
| 1927 | 81,194                                     | 100               | 4                                |
| 1928 | 81,737                                     | 101               | 14                               |
| 1929 | 65,849                                     | 81                | 17                               |
| 1930 | 70,890                                     | 87                | 29                               |
| 1931 | 46,895                                     | 58                | 24                               |
| 1932 | 46,215                                     | 57                | 18                               |
| 1933 | 32,058                                     | 39                | 26                               |
| 1934 | 32,480                                     | 40                | 7                                |

Carlot shipments have been paralleled by carlot unloads in eight markets in Ohio and nearby states - Buffalo, Cincinnati, Cleveland, Columbus, Detroit, Pittsburgh, Toledo and Youngstown. The total number of unloads in these cities declined from 8349 cars in 1927 to 3210 cars in 1934, or 38 per cent as many carlots in 1934 as seven years earlier.

Table 4 - Carlot Unloads of Grapes in 8 Markets.  
1927 - 1934

| Year | Carlot Unloads | Index<br>(1927=100) |
|------|----------------|---------------------|
| 1927 | 8349           | 100                 |
| 1928 | 9139           | 109                 |
| 1929 | 7796           | 93                  |
| 1930 | 7354           | 88                  |
| 1931 | 4279           | 51                  |
| 1932 | 3424           | 41                  |
| 1933 | 3113           | 37                  |
| 1934 | 3210           | 38                  |

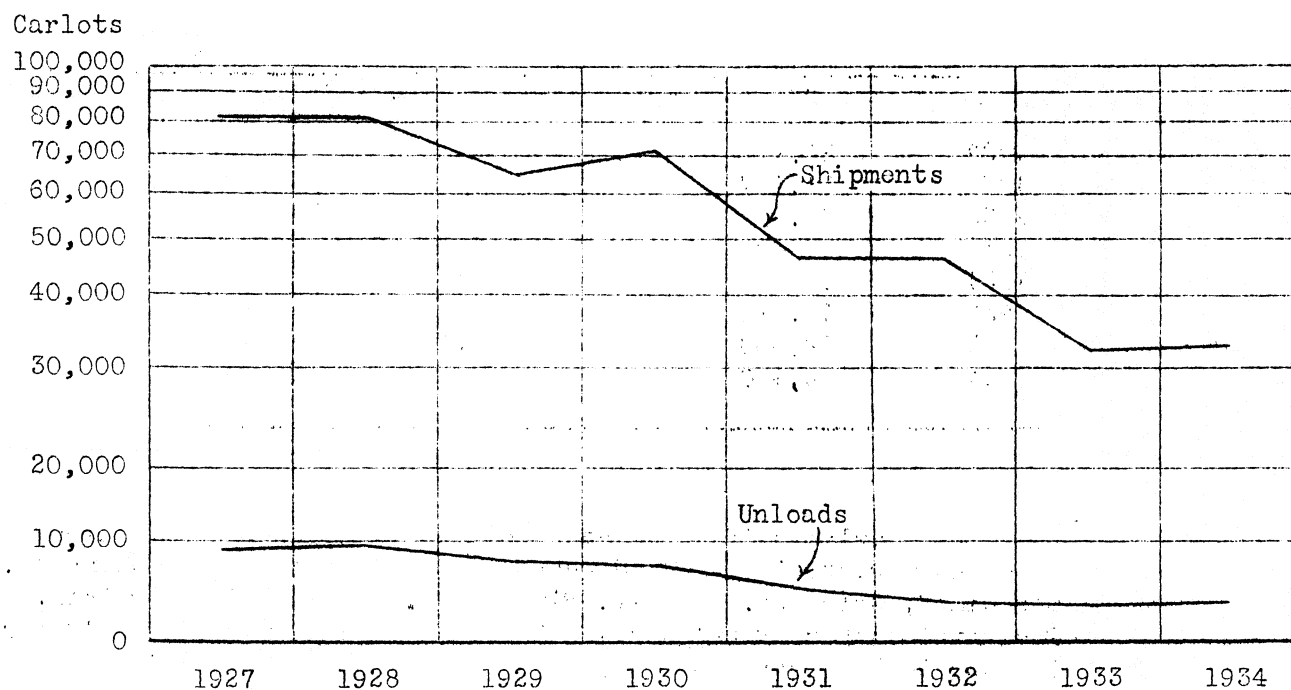


Figure 2 - Grapes: U.S. Shipments, and Unloads  
in 8 Markets, 1927-1934.

These eight cities include the markets in which most Ohio grapes are sold, though it will be noted from the following table that no cars from Ohio were among those unloaded in these cities in 1934. As has been pointed out elsewhere, movement from Ohio vineyards is almost entirely by truck, and is not recorded. California furnished 95 per cent of the unloads.

Table 5 - Carlot Unloads of Grapes in 8 Markets  
by States, 1934

| Origin       | Buf-<br>falo | Cincin-<br>nati | Cleve-<br>land | Colum-<br>bus | De-<br>troit | Pitts-<br>burgh | Tole-<br>do | Youngs-<br>town | Total | Pct. of<br>Total |
|--------------|--------------|-----------------|----------------|---------------|--------------|-----------------|-------------|-----------------|-------|------------------|
| Arizona      | -            | -               | -              | -             | 1            | -               | -           | -               | 1     | .05              |
| California   | 256          | 349             | 466            | 96            | 643          | 1104            | 56          | 84              | 3054  | 95.1             |
| Michigan     | -            | 1               | -              | -             | -            | 2               | -           | -               | 3     | .1               |
| Missouri     | -            | -               | -              | -             | -            | 1               | -           | -               | 1     | .05              |
| New York     | -            | 2               | -              | -             | -            | 54              | -           | -               | 56    | 1.7              |
| Pennsylvania | -            | 2               | -              | -             | -            | 47              | -           | -               | 49    | 1.5              |
| Argentina    | -            | 3               | 10             | -             | 11           | 17              | -           | -               | 41    | 1.3              |
| Spain        | -            | -               | 2              | -             | 3            | -               | -           | -               | 5     | .2               |
| Total        | 256          | 357             | 478            | 96            | 658          | 1225            | 56          | 84              | 3210  | 100.0            |

The greater part of the supplies moving to these markets arrive in September, October and November, and thus compete directly with grapes from Ohio vineyards which are harvested and sold in these months. Almost three-fourths of the entire unloads for the year 1934 arrived during this three-months period.

Table 6 - Carlot Unloads of Grapes in 8 Markets  
by Months, 1934

| Month     | Buf-<br>falo | Cincin-<br>nati | Cleve-<br>land | Colum-<br>bus | De-<br>troit | Pitts-<br>burgh | Tole-<br>do | Youngs-<br>town | Total | Pct.of<br>total |
|-----------|--------------|-----------------|----------------|---------------|--------------|-----------------|-------------|-----------------|-------|-----------------|
| January   | 1            | 5               | 3              | 1             | 3            | 14              | -           | -               | 27    | .8              |
| February  | -            | -               | -              | -             | -            | -               | -           | -               | 0     | .0              |
| March     | -            | -               | -              | -             | -            | 2               | -           | -               | 2     | .1              |
| April     | -            | 2               | 5              | -             | 6            | 10              | -           | -               | 23    | .7              |
| May       | -            | 1               | 5              | -             | 5            | 5               | -           | -               | 16    | .5              |
| June      | 1            | 3               | 6              | 1             | 8            | 3               | -           | -               | 22    | .7              |
| July      | 20           | 22              | 36             | 2             | 51           | 50              | -           | 1               | 182   | 5.7             |
| August    | 31           | 49              | 70             | 8             | 89           | 115             | 7           | 6               | 375   | 11.7            |
| September | 51           | 66              | 66             | 17            | 130          | 168             | 8           | 24              | 530   | 16.5            |
| October   | 82           | 120             | 129            | 28            | 206          | 479             | 19          | 32              | 1095  | 34.1            |
| November  | 51           | 63              | 113            | 31            | 116          | 293             | 17          | 18              | 702   | 21.9            |
| December  | 19           | 26              | 45             | 8             | 44           | 86              | 5           | 3               | 236   | 7.3             |
| Total     | 256          | 357             | 478            | 96            | 658          | 1225            | 56          | 84              | 3210  | 100.0           |



## Section 3 - Wineries in Ohio.

Section 6064-15 of the General Code of the State of Ohio, part of the state liquor control act, provides for the issuance of permits, known as A-2 permits, to manufacturers "to manufacture wine, to import and purchase wine in bond for blending purposes, the wine so purchased to be blended with not less than 51 per cent of wine produced from grapes grown in the state of Ohio, to purchase and import grape brandy for fortifying purposes, and to sell such product."

This is the only type of permit issued by the State Board of Liquor Control to manufacture wine in Ohio, and is required of all manufacturers in addition to the requirements of the federal Internal Revenue Service.

Applicants for these permits are required to estimate the annual productive capacity of their plants. 131 such applications on file with the State Board of Liquor Control indicate total capacity in the state of approximately 250,000 barrels.

Table 7 - Estimated Capacity of Wineries in Ohio.

| County                      | Number of applicants<br>for A-2 permits | Estimated capacity<br>of plants<br>(bbls.) <sup>/1</sup> |
|-----------------------------|---|--|
| Ashtabula                   | 7                                       | 708  |
| Cuyahoga                    | 52                                      | 218,067  |
| Erie                        | 14                                      | 19,305   |
| Hamilton                    | 5                                       | 1,425  |
| Lake                        | 4                                       | 710  |
| Lorain                      | 12                                      | 2,600  |
| Lucas                       | 4                                       | 230  |
| Mahoning                    | 4                                       | 500  |
| Ottawa                      | 11                                      | 903  |
| Miscellaneous <sup>/2</sup> | 18                                      | 1,033  |
| Total                       | 131                                     | 245,481  |

<sup>/1</sup> 50 gallons each.

<sup>/2</sup> Includes all counties having fewer than 4 wineries, consolidated to prevent identification.



## Section 4 - Data Furnished by 183 Growers.

During the summer and fall of 1934 an inquiry was made by the Ohio Agricultural Experiment Station among grape growers in northern Ohio. The inquiry dealt with such matters as acreage, varieties, production, sales, and attitudes toward various proposals having to do with marketing the crop. Results of the study are set forth herein. Questionnaires were distributed among several hundred vineyardists, and usable replies were received from 183. These are typical commercial growers, averaging slightly more than 9 acres of grapes each in 1934.

Their total of 1693 acres of vineyards is 138 acres, or 8 3/4 per cent greater than was operated by these same growers 5 years earlier, in 1929. If the same percentage of increase has taken place in other vineyards as in these 183, the present acreage of grapes in Ohio is larger than at any time since about 1909.

More than 80 per cent of the plantings reported are Concord. More than half of the remainder are Catawba, the balance being made up principally of Niagara, Delaware, Ives and Wardon. The increase since 1929 has occurred mainly in Concord, with more than 10 per cent greater acreage in 1934 than 5 years earlier. Catawba is the only other variety to show an increase, with a little over 1 per cent larger acreage.

Table 8 - Varieties of Grapes Grown by 183 Ohio Growers,  
1929-1934

| Varieties     | Acres<br>1929 | Pct. of<br>total<br>1929 | Acres<br>1934 | Pct. of<br>total<br>1934 | Increase<br>or<br>decrease | Per cent<br>of<br>change |
|---------------|---------------|--------------------------|---------------|--------------------------|----------------------------|--------------------------|
| Agawam        | 5             | .32                      | 5             | .30                      | -                          | -                        |
| Catawba       | 165           | 10.61                    | 185           | 10.93                    | + 20                       | + 1.21                   |
| Champion      | 1             | .06                      | 1             | .06                      | -                          | -                        |
| Concord       | 1239          | 79.68                    | 1369          | 80.86                    | + 130                      | + 10.49                  |
| Delaware      | 39            | 2.51                     | 33            | 1.95                     | - 6                        | - 15.38                  |
| Ives          | 28            | 1.80                     | 28            | 1.65                     | -                          | -                        |
| Moore's Early | 2             | .13                      | 2             | .12                      | -                          | -                        |
| Niagara       | 47            | 3.02                     | 44            | 2.60                     | - 3                        | - 6.38                   |
| Norton        | 3             | .19                      | 3             | .18                      | -                          | -                        |
| Wardon        | 26            | 1.68                     | 23            | 1.35                     | - 3                        | - 11.54                  |
| Total         | 1555          | 100.00                   | 1693          | 100.00                   | + 138                      | + 8.87                   |

These growers reported intentions to plant 56.5 acres of new vineyards in 1935, divided among varieties as follows: Agawam, 1 acre; Catawba, 17.5 acres; Concord, 24.5 acres; Delaware, 3.5 acres; Moore's Early, 5 acres; Niagara, 2 acres; and Ontario, 3 acres.

Sales aggregating more than 3700 tons of grapes in 1933 were reported by these growers. Three-fourths of this amount was sold for juice or wine purposes, while less than 12 per cent went for fresh table use. Though 11 per cent was reported as sold for purposes unknown to the sellers, it is clear that a large majority of Ohio's grape crop moves into consumption in the form of wine or grape juice.

Table 9 - Uses Made of Grapes Sold by 183 Ohio Growers, 1933.

| Uses reported<br>by growers | No. of tons | Per cent of total |
|-----------------------------|-------------|-------------------|
| Juice or wine               | 2829        | 75.64             |
| Fresh table                 | 440         | 11.76             |
| Other known uses            | 5           | .13               |
| Uses unknown                | 431         | 11.53             |
| Total Sold                  | 3705        | 99.06             |
| Home consumption (unsold)   | 35          | .94               |
| Total reported              | 3740        | 100.00            |

The crop was distributed over a relatively small area. Almost one-half of this quantity was sold directly in Cleveland. Another third was delivered to buyers at the farms, a large part of which amount doubtless went also to Cleveland, since most of the grape buyers operating in northern Ohio have headquarters in that city. The growers' cooperative organization took about 10 per cent of the amount reported, and part of this also was sold to Cleveland buyers. Incidentally the quantity delivered to the cooperative was reported entirely by growers in Ashtabula and Lake Counties.

Table 10 - Distribution of Grapes Sold by 183 Ohio Growers, 1933

| Place of delivery<br>by grower | Total<br>amount delivered<br>(tons) | Per cent of<br>total |
|--------------------------------|-------------------------------------|----------------------|
| Cleveland                      | 1537                                | 41.48                |
| Farms                          | 1315                                | 35.49                |
| Cooperative warehouse          | 370                                 | 9.99                 |
| Lake Erie Islands              | 155                                 | 4.18                 |
| Sandusky                       | 71                                  | 1.92                 |
| Cincinnati                     | 36                                  | .97                  |
| Columbus                       | 20                                  | .54                  |
| Youngstown                     | 20                                  | .54                  |
| Ashtabula                      | 19                                  | .52                  |
| Lorain                         | 16                                  | .43                  |
| Parkersburg, W. Va.            | 15                                  | .40                  |
| Detroit, Mich.                 | 12                                  | .32                  |
| Pittsburgh, Pa.                | 11                                  | .30                  |
| Akron                          | 10                                  | .27                  |
| Newark                         | 10                                  | .27                  |
| All Others                     | 88                                  | 2.38                 |
| Total                          | 3705                                | 100.00               |



Two thirds of these 183 growers wanted daily radio information on grape prices, especially farm prices, during the harvest season. In response to the question "Would daily radio information on grape prices in Cleveland and at farms in northern Ohio be of value to you?" replies were received as indicated in the following table.

Ohio grape growers are feeling the lack of market news. With farm sales being made by so many producers independently the need for continuous, reliable and thorough farm market information has become apparent to many of them.

Table 11 - Attitudes of 183 Ohio Grape Growers Toward Daily Radio Broadcasts of Market Information

| County    | No. of replies | Favorable | Unfavorable | Non-committal |
|-----------|----------------|-----------|-------------|---------------|
| Ashtabula | 58             | 40        | 5           | 13            |
| Cuyahoga  | 42             | 28        | 3           | 11            |
| Erie      | 16             | 8         | 2           | 6             |
| Huron     | 1              | -         | -           | 1             |
| Lake      | 50             | 39        | 4           | 7             |
| Lorain    | 2              | 1         | -           | 1             |
| Ottawa    | 14             | 10        | 1           | 3             |
| Total     | 183            | 126       | 15          | 42            |
| Per cent  | 100.0          | 68.8      | 8.2         | 23.0          |

The attitude of these growers toward cooperative marketing of grapes was divided. The question was asked, "Would you affiliate with and patronize a state-wide, strong, well-managed cooperative if such an association were organized to grade, pack and sell Ohio grapes?" Slightly more than half of the growers indicated a favorable attitude toward such an undertaking, with 12 per cent unfavorable and 30 per cent non-committal. In Ashtabula and Lake Counties, where the existing cooperative has been functioning for some years, the percentage of favorable replies was somewhat higher than elsewhere.

Table 12 - Attitudes of 183 Ohio Grape Growers Toward Cooperative Marketing of Grapes

| County    | No. of replies | Favorable | Unfavorable | Non-committal |
|-----------|----------------|-----------|-------------|---------------|
| Ashtabula | 58             | 40        | 7           | 11            |
| Cuyahoga  | 42             | 21        | 7           | 14            |
| Erie      | 16             | 9         | 2           | 5             |
| Huron     | 1              | 1         | -           | -             |
| Lake      | 50             | 26        | 6           | 18            |
| Lorain    | 2              | 1         | -           | 1             |
| Ottawa    | 14             | 7         | 1           | 6             |
| Total     | 183            | 105       | 23          | 55            |
| Per cent  | 100.0          | 57.3      | 12.6        | 30.1          |

The growers were asked to state what they thought might be done to increase returns to producers, and to improve grape marketing in Ohio. In addition to expressing their views on market information and cooperation, as recorded above, they submitted a variety of suggestions. These are enumerated below.

Table 13 - Suggestions for Improving Grape Marketing  
Proposed by Ohio Grape Growers

| Proposal  | Number of growers<br>offering suggestion |
|---|--|
| Improve quality by standardized grading         | 20                                       |
| Organize grower-owned wineries and juice plants | 9  |
| Agree on standard price schedules               | 9  |
| Advertise                                       | 8  |
| Lower taxes                                     | 3  |
| Wider and more orderly distribution             | 3  |
| Eliminate interstate competition                | 2  |
| Encourage direct sales to consumers             | 2  |
| Lower railroad freight rates                    | 1  |
| Reduce acreage                                  | 1  |
| Miscellaneous                                   | 8  |

It is interesting to note that only one grower suggested a reduction in acreage as a means of improving the situation. Just how certain others of these proposals would be put into effect by their proponents is not clear; as for example, "Wider and more orderly distribution," and "Eliminate interstate competition." Nor is it evident how Ohio grape growers and shippers could benefit from any reduction in railroad freight rates on grape shipments. Since rail transportation plays a negligible part in the distribution of Ohio grapes, such reduction in freight rates would seem to be of advantage not to Ohio shippers but to their competitors who make greater use of railroads.

A further discussion of the more significant of these proposals will be found in Section 7.

## Section 5. - Prices and Market Information


 eturns from grapes have been unsatisfactory to many Ohio growers in recent years. During the three years following 1929 prices declined steadily until in 1932 quotations on half-bushel baskets of Concords in the Cleveland wholesale market were only one-third as high as in 1929. Some recovery was apparent in 1933, but the average quotation in that year was still only 45 per cent as high as in 1929. Prices in 1934 represented a still further advance, though slight. 1934 quotations averaged only about one-half as high as the 1929 level. Increased demand from commercial wine makers following the repeal of prohibition was accompanied by a much smaller price advance than had been expected by many growers.

Table 14 - Average Prices of  $\frac{1}{2}$  Bu. Baskets Concord Grapes in Cleveland, 1929-1934.

| Year | Average Prices<br>U.S. Dept. Agr.<br>(dollars) | Index<br>(1929=100) |
|------|--|---------------------|
| 1929 | .8510  | 100                 |
| 1930 | .5403  | 63                  |
| 1931 | .3548  | 42                  |
| 1932 | .2706  | 32                  |
| 1933 | .3849  | 45                  |
| 1934 | .4494  | 53                  |

Prices in the main are arrived at through individual bargaining between buyers and sellers. Most grape growers in northeastern Ohio sell individually to itinerant truck buyers at the farms or haul their grapes to nearby cities, principally Cleveland, for disposal to dealers or to juice pressers and wine makers. A relatively small number of growers in this area are members of a cooperative marketing organization which sells and distributes grapes for its members. In northcentral Ohio most of the crop is used by wine makers located in or near the producing areas.

Prices of grapes delivered in the Cleveland wholesale market have been reported daily during the marketing season each year beginning in 1929 by the Market News Service of the U. S. Bureau of Agricultural Economics. These daily reports have been available by mail without charge to all who cared to apply, and have been published each day in Cleveland newspapers. Prices at the farms have not been reported.

Although no official records of individual farm prices in Ohio are available it is known that these prices have varied more widely than have delivered prices. Certain growers who lacked volume, or finances, or bargaining skill have been known to accept offers below prevailing quotations in their localities. Instances also are not uncommon in which the prices received in one community were materially lower than elsewhere for like quantity and quality.

Lack of market information among sellers, and it may be also among buyers, is doubtless responsible in part for such price discrepancies. If there were widespread knowledge of supplies available and prices being paid to farmers in each important producing section, it could hardly fail to exert a stabilizing influence on prices.

Acting in this belief, the Ohio Agricultural Experiment Station arranged for the collection and dissemination of such information throughout the 1934 grape harvest. This venture was initiated at the request of about 200 grape growers in six northern Ohio counties, and was made possible through the cooperation of the growers, the county agricultural extension agents in those counties, the Northern Ohio Food Terminal in Cleveland, the U. S. Bureau of Agricultural Economics, and radio station WTAM.

Grape news of significance in the marketing of the crop was broadcast from this powerful Cleveland station at a regular hour every day or so throughout the latter part of September and the entire month of October. These broadcasts contained data on production, quantities remaining unsold, prices in the Cleveland wholesale market, and prices at farms in the northern Ohio grape belt and in neighboring states.

County agricultural agents in the counties bordering on Lake Erie from Sandusky east to the Pennsylvania state line selected key growers in all important grape-growing communities who kept the agents informed on prices, movement, quantities remaining unsold, and other factors bearing on market conditions in those communities. The agents then telegraphed or telephoned their reports to the office of the Terminal company in Cleveland, whence they were transmitted to the U. S. Department of Agriculture market news representative for inclusion with his daily record of Cleveland wholesale fruit and vegetable sales. The resulting report was then released through the radio station and the daily newspapers.

Costs of the service were negligible. A few public spirited growers contributed 25 or 50 cents each to a small fund in each county to defray expenses of the messages transmitting information from the county agent's office to Cleveland. All other services were rendered without charge by the agencies participating.

The effectiveness of the reports in promoting uniformity and stability in farm prices of grapes cannot be measured with certainty yet a number of well informed growers and dealers have expressed the belief that less variation was observed than in previous years. It will be noted that the lowest farm price reported for Concords in 1934 was \$15. per ton and the highest \$50. per ton, a range of \$35. between the extreme quotations. No direct comparison is possible between these prices and those received for like quality in earlier years when farm information was not disseminated throughout the season, yet it should be pointed out that 183 growers in seven counties reported farm prices for Concords in 1933 ranging from \$13. to \$60. per ton, a range of \$47. between the extreme quotations.

A number of growers in northern Ohio who followed the market news reports; throughout the 1934 season became convinced that prices would strengthen at the close of the harvest. Certain of these growers are known to have refused early offers. They not only delayed picking as late as possible, but in some cases stored part of the crop for short periods. They were rewarded by sales around \$50. a ton at the farm for Concords which earlier in the season had been moving at prices as low as \$18. at the farm.

The following 18 reports were broadcast.

- Sept. 25 "The grape harvest in Northern Ohio is about two weeks earlier this year than usual and is in full swing at the present time. Some growers report that their grapes are so ripe that they are beginning to fall and the season will likely be shorter than usual. Housewives who are planning to make preserves or jellies from home grown grapes should arrange to get their supply in the very near future. Wineries around Sandusky are paying fairly satisfactory prices for grapes in the bulk and unless prices hold firm here in the Cleveland market, many growers will take their supplies to the wineries and there will be smaller supply for the Cleveland market than usual."
- Sept. 27 "According to the County Agricultural Agent at Cuyahoga County, the grape season in this county is at least two weeks earlier than usual and the crop of grapes is ready to move at once. The demand for grapes has been rather slow, perhaps due to the fact that buyers usually do not buy local grapes in large quantities until later in the season. However, the season this year is so advanced that those who wish to get a supply of local grapes should do so at once as the season will end much earlier than in former years."

- Oct. 1 "Indications point that the grape season will be over much earlier than usual. Grapes in Northern Ohio counties are full ripe now and in some sections are dropping from the vines. The season is at least two weeks earlier than usual and there seems to be a tendency on the part of buyers to wait a while before buying local grapes. Buyers should get their supply of local grapes as soon as possible because in a short while there is likely to be a shortage of home grown grapes."
- Oct. 3 "The cool nights have increased the demand for grapes and growers in Cuyahoga County report that they have more inquiry for grapes in large quantities and quite a few Concords are being sold at \$40.00 per ton with a few fine quality selling as high as \$50.00. On the terminal market half bushel baskets of Concords sold at 40 to 50¢ and cartons containing 12 - 2 qt. baskets, fable stock, brought \$1.25. The grape season is earlier this year than usual and you had better get your supply of home grown grapes at once."
- Oct. 5 "The grape harvest is well under way in Northern Ohio counties and reports from around Sandusky indicate that most of the Concords in that section have already been harvested. Wineries in Sandusky are reported to be paying \$40.00 per ton for Concords, \$80.00 per ton for Catawbases and \$100.00 for Delawares. Prices paid to growers around Cleveland range from \$25.00 to \$45.00 per ton for Concords depending on the quality. Grapes are full ripe now and the harvest is in full swing in Cuyahoga County and those who want home grown grapes should get their supply immediately."
- Oct. 8 "The demand for home grown grapes seems to be improving in the producing areas and growers are moving them in large quantities. The Concord crop around Sandusky, according to reports, is practically harvested. Wineries at Sandusky were paying around \$40.00 per ton for Concords. There seems to be a wide range in prices reported in areas around Cleveland, ranging anywhere from \$30. to \$45. per ton, with more sales being reported around \$35. This latter price seems to be more in line with the prices being paid in the Chautauqua Erie District in New York State where juice plants and wineries are reported to be paying around \$30. per ton for wine stock."
- Oct. 10 "According to the County Agent of Ashtabula County, the grape harvest there is at its height but the demand is rather slow. Buyers are offering only \$30.00 per ton for Concords but growers are holding for \$35.00 to \$40.00 according to quality. A few sales of small lots have been reported at some farms there at \$32.00 to \$35.00 per ton."

This price is in line with prices in producing areas in other sections. Wineries and juice plants are reported to be paying around \$32.00 in the Michigan area while in New York State juice stock in 12 qt. baskets is selling at mostly around \$33.00 per ton including baskets."

- Oct. 11 "The demand for home grown grapes seems to be improving and reports from the Sandusky area indicate that the Concord crop there is entirely harvested and prices received by growers there were fairly satisfactory and tended to advance at the close of the season. Many buyers failed to realize that the grape season was so much earlier this year and waited until the usual time to get their grapes, resulting in some buyers being compelled to get grapes from other sections. The demand for Concords in both the Michigan and New York districts is moderate and with growers holding for higher prices the market is expected to show a little advance. However, at present \$32.00 to \$33.00 per ton seems to be the prevailing prices in these areas for juice grapes and this price includes the baskets."
- Oct. 12 "Grape production in the United States on October 1, was estimated to be about 12 per cent less than last year's crop and about one-fourth under the average crop. The Great Lakes area crop is nearly 14 per cent less than in 1933 with Ohio showing a decrease of over 3,000 tons. According to the County Agricultural Agent of Lake County, the grape movement in that county is quite active and the peak movement will be reached next week. Prices seem to have standardized around \$30.00 per ton for Concords on the farm without baskets and \$35.00 delivered in Cleveland with the baskets returned. Growers are requiring deposits on baskets and some sales have been reported at \$40.00 per ton delivered in Cleveland including baskets."
- Oct. 15 "The cold weather over the week-end will tend to hasten the harvesting of the grape crop in Northern Ohio. Most vines were turned brown by the freeze and growers will be anxious to complete their harvest as quickly as possible. The market in Cleveland was steady with half-bushel baskets bringing 40 to 50¢ according to quality, while cartons containing 12 - 2 qt. baskets, table stock, sold at \$1.25. According to advices, prices in wholesale quantities remain around \$30.00 per ton on the farm not including baskets. In New York districts, Concords are bringing \$31.00 to \$33.00 per ton including baskets, with a few selling as high as \$35.00, and truckers are paying growers \$28.00-\$29.00 per ton without baskets on the farms while juice plants and wineries are paying \$30.00 per ton delivered to their plants."

- Oct. 16 "According to information furnished by the County Agricultural Agents and key growers in Northern Ohio Counties, the grape crop around Sandusky is practically all harvested. Concords found a market around \$40.00 per ton. At Vermillion the Catawba harvest is in full swing this week and growers are receiving around \$100.00 per ton with selected stock selling at \$2.80 per bushel. In the Jefferson area many Concords are being sold at the farm at \$30.00 to \$35.00 per ton without baskets and the price is expected to advance this week although very few sales have been reported above \$35.00."
- Oct. 17 "The Chautauqua Erie grape district in New York and Pennsylvania suffered considerable damage from cold weather last Sunday morning. Temperatures as low as 24 degrees were reported in this area. There was a severe freeze in the Eastern end of the belt and a light freeze in the Western end. Although juice plants and wineries are paying only \$30.00 per ton for Concords, there is a stronger feeling to the market for stock uninjured by the freeze as total production is expected to be materially decreased on account of the freeze. Some shippers are asking as high as \$40.00 per ton for Concords but the general price is \$31.00 to \$33.00 per ton including baskets. Wineries are paying \$20.00 per ton for frosted stock. The market in producing areas in Northern Ohio Counties remains firm and some growers feel that prices are likely to advance when buyers realize that the crop will be harvested much more quickly than usual this year."
- Oct. 19 "The cold weather seems to have affected the grapes in some sections in Northern Ohio Counties as well as in Pennsylvania and New York. Some growers report that their grapes are not keeping well. The demand is rather slow and some growers in Cuyahoga County are offering to sell their grapes at \$25.00 per ton if the buyer picks them. In other sections of Northern Ohio the market seems to be holding steady at the same prices reported the first of the week. In the Chautauqua Erie Grape Belt it is estimated that 30 to 35 per cent of the crop is yet to be harvested, with 40 to 50 per cent of the same damaged by the freeze which ranges from very slight to severe. The shipments in this area have been fairly liberal the last day or two and are probably at their height now. Demand and trading has been good there with a wide range in price due mostly to the condition of the grapes. The general price is \$30.00 to \$33.00 per ton including baskets with a few selling lower and some shippers asking \$35.00. Truckers are reported to be paying growers \$18.00 to \$25.00 per ton at the farm. Juice plants and wineries are paying \$28.00 to \$30.00 per ton for U. S. #1's, Juice, Concords, and \$15.00 to \$20.00 per ton for Unclassified stock. The market in Cleveland today was dull on ordinary stock, but table stock was firm, with cartons containing 12 - 2 qt. baskets selling at \$1.25. Half-bushel baskets showed a wide range in quality and brought 35 to 50¢ with most stock selling at 40 to 45¢."




- Oct. 22 "Information received from growers around Jefferson indicates that the demand for grapes in that section has been slow and there is a slightly weaker tendency to the market. Prices on Concords range from \$28.00 to \$30.00 per ton on the farm. One large grower in that section is reported to be pressing all of his grapes into wine. The condition of grapes in Northern Ohio and in the Chautauqua Erie District in New York and Pennsylvania has been very adversely affected by the cold weather and there is a wide range in price due to the condition. In the Chautauqua Erie District best Concords in 12 qt. baskets are selling at \$28.00 to \$29.00 per ton including baskets, while unclassified stock is bringing \$22.00 to \$23.00 per ton and the cash price to growers per ton without baskets is \$18.00 to \$25.00 while wineries and juice plants are paying \$15.00 to \$28.00 per ton according to quality and condition. On the Cleveland market this morning the grape market was rather dull on ordinary stock. Cartons containing 12 - 2 qt. baskets continued to sell at \$1.25 while half-bushel baskets brought 35 to 42<sup>1</sup>/<sub>2</sub> according to quality."
- Oct. 23 "Indications are that the grape season in Northern Ohio districts is rapidly drawing to a close. The heavy frosts have killed the foliage and grapes show signs of dropping from the vines and growers are harvesting them as quickly as possible. The demand has been only moderate and some price concessions have been made with prices ranging generally from \$25.00 to \$30.00 per ton at the farm. On the Cleveland market this morning there was a slightly firmer tone to the market and half-bushel baskets sold readily at 40 to 45¢."
- Oct. 25 "Supplies of nearby grapes are lighter and the market showed a slightly stronger tendency. Cartons containing 10 - 2 qt. baskets, table stock, sold readily at \$1.25 while half-bushel baskets brought 40 to 50¢ according to quality, with best stock selling at 45 to 50¢. The season in Ohio seems to be rapidly drawing to a close. In Chautauqua Erie District it is estimated that there are but 75 to 100 cars left in the belt. Some juice plants and wineries there have already closed and others will be through by the last of the week. Prices in that district are slightly higher, with Concords in 12 qt. baskets bringing \$26.00 to \$40.00 per ton including baskets, according to quality."
- Oct. 29 "Grapes were in light supply and half-bushel baskets brought 55 to 60¢. The season in Northern Ohio is practically ended and buyers report that it is difficult to get grapes in any large quantities. Prices advanced to at least \$40.00 per ton on the farm during the last few days. In the Chautauqua Erie District the season is also practically ended and prices there have shown advance, with juice stock bringing \$35.00 to \$37.00 per ton including baskets, with unclassified stock selling lower. In the Michigan District supplies of grapes are reported to be very light and 12 qt. baskets, Concords, brought 32 to 35¢ with 4 qt. table stock selling at 15 to 17<sup>1</sup>/<sub>2</sub>¢."

Nov. 1 "According to information received from the County Agent at Jefferson, Ohio, there is a strong demand for grapes from the wine press buyers and these buyers are bidding up to \$50.00 per ton at the farm for Concords and the buyer furnishes the container. The best previous price offered has been around \$45.00 per ton. Many growers in the neighborhood of Jefferson have stored most of their crop and are now moving them at around \$50.00 per ton. There were no supplies of homegrown grapes on the terminal market in Cleveland this morning and it is reported a few baskets were offered on the farmers' markets and sold at around 75¢ per half-bushel basket."



## Section 6 - Buying Practices of Grape Consumers in Cleveland

 Consumers' buying practices doubtless bear a close relationship to the success or failure of marketing methods employed by growers. It would seem desirable for Ohio grape growers to give consideration to these buying practices in planning the marketing of their crops. To ascertain what those practices are and to make the facts available for any who care to use them, a house to house canvass of more than 12,000 families in Cleveland was made between January 8 and March 15, 1935.

This study was participated in by the Ohio Agricultural Experiment Station and the Federal Emergency Relief Administration in Cuyahoga County. Enumerators furnished by the latter organization called on families in selected districts in the incorporated cities of Cleveland, East Cleveland, Cleveland Heights, Shaker Heights, and Lakewood. This five-city area was selected for study because it is a typical metropolitan area, and because it furnishes a market for a large part of the grapes grown in Ohio.

The residential districts canvassed were classified into four main economic groups, conforming with an analysis of the five-city area by Howard Whipple Green, Supervisor, Sixth District of Ohio, Fifteenth Decennial Census of the United States, 1930. The classification is based on rents and equivalent rental values of homes, the lowest or fourth quarter containing those districts in which these values ranged from \$10. to \$29.99 a month; the third quarter, from \$30. to \$39.99; the second, from \$40. to \$49.99; and the highest, or first, from \$50. upward. The 260,770 families in the five-city area are divided almost equally into these four groups, and the families interviewed likewise were divided in almost the same proportions. Almost 5 per cent of the families residing in the area was canvassed, and the results are believed to be reliable.

Table 15 - Families Interviewed in Five-City Area, 1935

| Economic Quarters | No. of families residing in area | No. of families interviewed | Pct. of total |
|-------------------|----------------------------------|-----------------------------|---------------|
| Highest           | 66,996                           | 3,167                       | 4.7           |
| Second            | 65,150                           | 3,092                       | 4.7           |
| Third             | 66,726                           | 3,219                       | 4.8           |
| Lowest            | 61,898                           | 2,817                       | 4.6           |
| Total             | 260,770                          | 12,295                      | 4.7           |

The inquiry dealt with the grapes used during the season just closed, that is, the 1934 crop. The enumerators asked in each household how many grapes were used, whether they were eastern type or western type grapes, where they were secured, and what uses were made of them. Quantities were recorded in terms of units purchased, such as pounds, bushels, crates, 2 qt. baskets, etc., but for purposes of comparison were converted into pounds.

About one-third of the families interviewed used no grapes at all. The largest percentage of families using grapes was found in the highest economic quarter, with 77 per cent, and the smallest percentage in the lowest quarter, with 58 per cent. No satisfactory information could be secured to show reasons why no grapes were used by those families reporting none used.

Table 16 - Percentage of Families Interviewed Using Grapes

| Economic Quarters | No. of families interviewed | Families using Grapes |                              | Families using no Grapes |                              |
|-------------------|-----------------------------|-----------------------|------------------------------|--------------------------|------------------------------|
|                   |                             | Numbers               | Pct. of families interviewed | Numbers                  | Pct. of families interviewed |
| Highest           | 3167                        | 2452                  | 77.4                         | 715                      | 22.6                         |
| Second            | 3092                        | 2106                  | 68.1                         | 986                      | 31.9                         |
| Third             | 3219                        | 2130                  | 66.2                         | 1089                     | 33.8                         |
| Lowest            | 2817                        | 1642                  | 58.3                         | 1175                     | 41.7                         |
| Total             | 12295                       | 8330                  | 67.8                         | 3965                     | 32.2                         |

The families interviewed used approximately 290 tons of the 1934 grape crop. Only a small part of this amount, or about 34 tons, was western grapes. The remainder, about 88 per cent of the total, was from eastern vineyards. It is not known what part originated in Ohio, or in other states. A tendency to use slightly larger percentages of western grapes was observed among families in the highest economic quarter. The amounts used per family (using grapes) varied from 55 pounds in the highest quarter to 86 pounds in the third quarter. The average for all families was 70 pounds. Families in the higher economic strata used smaller quantities per family, despite greater purchasing power and more general use of grapes by families in this group.

Table 17 - Amounts and Kinds of Grapes Used by Families Interviewed.

| Economic Quarters | Eastern Grapes Used |               | Western Grapes Used |               | Total pounds | Av. lbs. per family |              |
|-------------------|---------------------|---------------|---------------------|---------------|--------------|---------------------|--------------|
|                   | pounds              | Pct. of total | pounds              | Pct. of total |              | Interviewed         | Using grapes |
| Highest           | 113,118             | 84.5          | 20,723              | 15.5          | 133,841      | 42                  | 55           |
| Second            | 123,092             | 88.6          | 15,764              | 11.4          | 138,856      | 45                  | 66           |
| Third             | 165,734             | 90.1          | 18,166              | 9.9           | 183,900      | 57                  | 86           |
| Lowest            | 110,553             | 89.0          | 13,727              | 11.0          | 124,280      | 44                  | 76           |
| Total             | 512,497             | 88.2          | 68,380              | 11.8          | 580,877      | 47                  | 70           |

Farmers' wholesale markets and vineyards were the principal sources from which the families interviewed secured eastern grapes. These two sources accounted for two-thirds of the eastern grapes used. Retail grocery stores supplied only 13 per cent. A similar amount was bought from growers and peddlers who delivered to the door, and the remainder was secured in retail markets, some of which are operated by the municipalities and others are owned privately. Retail groceries, on the other hand constituted the leading sources of supply of western grapes, 80 per cent of these being bought in retail stores, and 14 per cent additional being bought in municipal and private retail markets.

Table 18 - Places Where Grapes Were Purchased  
by Families Interviewed.

|                           | 1      |        | 2      |        | 3      |        | 4      |        | 5      |        | total   |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
|                           | (lbs.) | (pct.) | (lbs.) | (pct.) | (lbs.) | (pct.) | (lbs.) | (pct.) | (lbs.) | (pct.) |         |
| <u>East. Grapes:</u>      |        |        |        |        |        |        |        |        |        |        |         |
| High quarter              | 18589  | 16.4   | 36083  | 31.9   | 42620  | 37.7   | 5669   | 5.0    | 10157  | 9.0    | 113,118 |
| 2nd. quarter              | 18220  | 14.8   | 25036  | 20.3   | 64180  | 52.1   | 6591   | 5.4    | 9065   | 7.4    | 123,092 |
| 3rd. quarter              | 19816  | 12.0   | 58364  | 35.2   | 34967  | 21.1   | 11302  | 6.8    | 41285  | 24.9   | 165,734 |
| Low quarter               | 11253  | 10.2   | 62449  | 56.5   | 12361  | 11.2   | 14655  | 13.2   | 9835   | 8.9    | 110,553 |
| Total                     | 67878  | 13.2   | 181932 | 35.5   | 154128 | 30.1   | 38217  | 7.5    | 70342  | 13.7   | 512,497 |
| Per cent of<br>all grapes | 55.1   |        | 100.0  |        | 100.0  |        | 79.7   |        | 95.4   |        | 88.2    |
| <u>West. Grapes:</u>      |        |        |        |        |        |        |        |        |        |        |         |
| High quarter              | 19328  | 93.3   | -      | -      | -      | -      | 1035   | 5.0    | 360    | 1.7    | 20,723  |
| 2nd. quarter              | 13135  | 83.3   | -      | -      | -      | -      | 2109   | 13.4   | 519    | 3.3    | 15,763  |
| 3rd. quarter              | 12456  | 68.6   | -      | -      | -      | -      | 3354   | 18.5   | 2356   | 12.9   | 18,166  |
| Low quarter               | 10307  | 75.1   | -      | -      | -      | -      | 3243   | 23.6   | 178    | 1.3    | 13,728  |
| Total                     | 55226  | 80.8   | -      | -      | -      | -      | 9741   | 14.2   | 3413   | 5.0    | 68,380  |
| Per cent of<br>all grapes | 44.9   |        | -      |        | -      |        | 20.3   |        | 4.6    |        | 11.8    |
| All Grapes                | 123104 | 21.2   | 181932 | 31.3   | 154128 | 26.5   | 47958  | 8.3    | 73755  | 12.7   | 580,877 |

- (1) Retail grocery stores.
- (2) Farmers wholesale markets.
- (3) Vineyards and roadside markets.
- (4) Municipal and private retail markets.
- (5) Delivered to door by growers, peddlers, etc.

Almost 90 per cent of the western grapes reported were used fresh for table purposes, whereas only 10 per cent of the eastern grapes were used thus. Wine and grape juice were made from about half of the eastern grapes, and from 11 per cent of the western. Families in the third economic quarter not only purchased larger quantities than those in other groups, but converted larger proportions into wine and grape juice. Families in the poorest residential districts, included in

the lowest economic quarter, did not report as large quantities as they are commonly believed to use. This perhaps may be accounted for by the abnormally low purchasing power of this group during the period of the study. Many of the families interviewed in these districts were receiving public relief.

Racial characteristics of families living in the districts canvassed were recorded in the 1930 census. In the highest economic quarter residents were predominantly native white, either of native parentage or of foreign or mixed parentage. Foreign-born whites from the British Empire made up most of the balance.


In the second economic quarter the same characteristics prevailed, except that somewhat larger percentages were foreign-born whites. The British Empire, Germany, and in some districts also Czechoslovakia, Poland, Italy and Russia, furnished most of these.

In the third and fourth economic quarters the population contained large elements of foreign-born whites and negroes. The foreign-born whites originated in Czechoslovakia, Poland, Yugoslavia, Hungary, Germany, Italy, British Empire, Rumania, Russia, Austria and Lithuania.

Table 19 - Uses Made of Grapes by Families Interviewed

|                           | Fresh<br>for table |        | Jelly and<br>similar uses |        | Wine and<br>Grapejuice |        | All others |        | Total   |
|---------------------------|--------------------|--------|---------------------------|--------|------------------------|--------|------------|--------|---------|
|                           | (lbs.)             | (pct.) | (lbs.)                    | (pct.) | (lbs.)                 | (pct.) | (lbs.)     | (pct.) | (lbs.)  |
| <u>East. Grapes:</u>      |                    |        |                           |        |                        |        |            |        |         |
| High quarter              | 15021              | 13.3   | 62059                     | 54.9   | 35451                  | 31.3   | 587        | .5     | 113,118 |
| 2nd. quarter              | 12919              | 10.5   | 59022                     | 47.9   | 50674                  | 41.2   | 477        | .4     | 123,092 |
| 3rd. quarter              | 13922              | 8.4    | 60534                     | 36.5   | 90862                  | 54.8   | 416        | .3     | 165,734 |
| Low quarter               | 10883              | 9.8    | 41804                     | 37.8   | 57122                  | 51.7   | 744        | .7     | 110,553 |
| Total                     | 52745              | 10.3   | 223419                    | 43.6   | 234109                 | 45.7   | 2224       | .4     | 512,497 |
| Per cent of<br>all grapes | 47.0               |        | 99.5                      |        | 96.8                   |        | 99.3       |        | 88.2    |
| <u>West. Grapes:</u>      |                    |        |                           |        |                        |        |            |        |         |
| High quarter              | 20128              | 97.1   | 180                       | .9     | 410                    | 2.0    | 5          | -      | 20,723  |
| 2nd. quarter              | 13793              | 87.5   | 800                       | 5.1    | 1170                   | 7.4    | -          | -      | 15,763  |
| 3rd. quarter              | 13480              | 74.2   | 40                        | .2     | 4636                   | 25.5   | 10         | .1     | 18,166  |
| Low quarter               | 11973              | 87.2   | 175                       | 1.3    | 1580                   | 11.5   | -          | -      | 13,728  |
| Total                     | 59374              | 86.8   | 1195                      | 1.7    | 7796                   | 11.4   | 15         | .1     | 68,380  |
| Per cent of<br>all grapes | 53.0               |        | .5                        |        | 3.2                    |        | .7         |        | 11.8    |
| All grapes                | 112119             | 19.3   | 224614                    | 38.7   | 241905                 | 41.6   | 2239       | .4     | 580,877 |

## Section 7 - Proposals for Improving Grape Marketing,

 From time to time suggestions have been advanced which their advocates believed would improve the marketing of Ohio-grown grapes. It may be well to examine here the more important of these suggestions.

- (a) Standardization and Government Inspection. Lack of uniformity in grading and packing methods used by growers is responsible for much of their dissatisfaction with returns. Each grower follows his own inclination in these matters, and grading in accordance with recognized United States standards is rare. Any day during the harvest season wide variations in quality can be observed in the Ohio grapes offered in the Cleveland market, for example. Deceptive packing, in which the face does not truly represent the remaining contents of the package, is not uncommon. Buying therefore is done almost exclusively upon inspection by the purchaser, for under these circumstances buyers have little confidence in goods which have not been examined by them in person or by their agents.

The Ohio Standardization Law which became effective in September 1933 requires that each package of grapes (and other fruits and vegetables) sold or offered for sale within this state be marked with the origin, quantity and grade of the contents, and be packed without attempt to deceive the purchaser. If the contents be not graded to conform with recognized standards the package then must carry the term "Grower's Grade." It was expected that this law would bring about greater uniformity in grading and packing of Ohio products, would encourage adoption of United States standards, would minimize unfair competitive advantages resulting from deceptive packing, and would tend to place marketing of these products on a foundation of confidence rather than of suspicion.

Unfortunately this statute has not yet brought the results hoped for by its sponsors. In part this is due to inadequate and ineffective enforcement. The Ohio Department of Agriculture, charged with administration of this law, has never had the funds or personnel necessary to accomplish a task of such magnitude. Failure of the law also is due in part to unfamiliarity of growers with the United States standards, and their reluctance to change grading and packing practices of long standing. It was easier to stamp every package "Grower's Grade" than to assume responsibility for having the contents meet the written requirements of an established grade. "Grower's Grade" thus means nothing more to the buyer than an unmarked package. He still must examine the contents to ascertain whether the grapes are good, bad or indifferent, and whether on today's market they are worth 50 cents, or only 25.

But many packages are sold openly in Ohio markets without even the "Grower's Grade" designation, since enforcement of the law perforce has been spotty. This is true of Ohio grapes as well as of those shipped into Ohio from other states. Thus the benefits that might result from universal compliance with standard grades have not been secured.

Government inspection plays a negligible part in the marketing of Ohio grapes, although joint federal-state inspection at shipping points on both rail and truck shipments is available at low cost, as well as federal receiving point inspection in all important markets. Little use has been made of these services because most sellers have only relatively small quantities to offer, buyers for the most part deal directly with sellers and often can examine the product before purchasing, and the grapes being consumed near where they are produced do not have to be shipped long distances to market. Little need has been felt for certificates of inspection for use as a basis of sale.

Nevertheless government inspection of grapes at shipping points in Ohio could bring about marked improvement in grade, thus exerting a stabilizing influence on the marketing of the crop. Wherever this service has been used it has resulted in greater uniformity in grading practices and higher quality of the goods sent to market. Its educational value alone warrants it being given a thorough trial.

Inspection cannot function successfully nor economically, however, unless the products inspected are consolidated into relatively large quantities at convenient distribution points, either in the hands of private or cooperative marketing organizations.

- (b) Cooperative Marketing. Ohio grape growers have taken group action in affairs of marketing to only a limited extent. One cooperative marketing organization with a membership of about 40 vineyardists in northeastern Ohio has been in existence for eighteen years. Its influence is small and localized. One or two other loosely formed groups have attempted to pool their bargaining power in arriving at prices with buyers, principally wine-makers, usually with indifferent success.

Under conditions prevailing in the grape territory of Ohio cooperative organizations are slow to develop, and usually are not supported so actively or loyally as in those regions where the need is greater. Ability to sell at some price, however low, without assuming responsibilities of membership nor relinquishing control over sales of his own grapes, has kept many a grower individualistic. Yet this very individualism retards orderly distribution of the crop. Sales by many weak, inexperienced and competing bargainners rather than by one or a few strong ones tend to lower prices. Lack of uniformity of the product has the same effect.



Assuming a large and loyal membership, sound financing and expert management, cooperative grape marketing in Ohio should place the industry on a more business-like plane. In fact, without it there seems little likelihood of securing the needed benefits of standardization nor of eliminating the unnecessary menace of cut-throat competition among sellers. Whether enough Ohio vineyardists would join and support a large-scale cooperative to assure its success is questionable, judging from the results of the inquiry reported in Section 4.

- (c) Grower-owned Wineries and Juice Plants. The making of wines and unfermented grape juice requires considerable capital, and an organization possessed of skill and experience. A firmly entrenched cooperative association might undertake the establishment of such a plant or plants, but in so doing certainly should consider the problems not only of manufacturing but of selling. Gaining and holding market outlets in the face of alert competitors already in the field would necessitate not only efficient production but aggressive salesmanship. Necessity for delays in returns to growers because sales await completion of fairly long processing periods, would increase the difficulty of keeping members satisfied and loyal.

There is already in Ohio considerable productive capacity not now in use. The construction of additional capacity at this time would appear hazardous. A few juice plants have been owned and operated by groups of growers in eastern states in recent years. None has achieved conspicuous success, and others have failed completely. This type of enterprise cannot be recommended under conditions in Ohio at present. As indicated in Section 4, very few growers expressed interest in grower-owned wineries or juice plants.

- (d) Roadside Marketing. In some communities substantial quantities of grapes are sold each fall to consumers at vineyards or at roadside retail markets maintained by growers. Sales thus made usually yield higher prices, or at least larger net returns, and therefore should be developed as much as possible, though at best such sales can dispose of only a small percentage of the total grape crop of the state.

Not all growers are located where advantage can be taken of these direct-to-consumer outlets. Others are either not interested in this type of merchandising or are poorly adapted to it. But it should be exploited intelligently and aggressively by those who can.

There are opportunities, moreover, for growers to join in operating roadside retail establishments in season, thus capitalizing on one or more favorable locations, displacing several feeble and unsightly stands with one or more vigorous, attractive markets, offering larger quantities and a wider variety of products, and operated by full-time sales-persons. Such markets also may serve as assembly points for quantities of produce great enough to attract wholesale buyers. Easy access to dependable sources of supply where the quantity is known to be large and the quality uniform, stimulates sales which otherwise might not be made at all.

- (e) Marketing Agreements. Under authority contained in the Agricultural Adjustment Act of 1933 a marketing agreement for California Tokay grapes was entered into by growers and shippers in mid-season 1933, and continued through 1934. 1600 growers were affected directly by this agreement, and the agreement was said 1 to have been instrumental in raising prices to growers 10 to 12 cents per package.

Although this procedure was successful in improving the income of producers of Tokay table grapes in California, it does not follow that similar success would necessarily accompany such an agreement among Ohio grape growers, nor that such agreement is possible at this time. Certain fundamental differences prevail. As stated by the Agricultural Adjustment Administration 2,

"Marketing Agreements are most adapted to those types of specialty crops whose production is geographically localized and whose market outlets and methods of marketing are well defined and lend themselves to control. A relatively small number of producers and handlers and the presence of strong cooperative marketing associations facilitate the adoption and execution of agreements."

It may be added that marketing agreements have proved most useful on those crops and in those areas where local production far exceeds local consumption.

The Ohio grape industry does not meet these specifications. Eastern grapes are produced in widely separated areas in several states, of which Ohio is only one. The types of grapes grown in these areas are similar and highly competitive. In Ohio the crop is grown mainly in small acreages, and is therefore in the hands of a relatively large number of growers. With most of these it is not the principal source of income. Cooperative marketing plays a minor role. Marketing methods are not uniform, nor in many cases well defined, except in those localities where the principal outlets are local wineries or juice plants. Many small buyers operate intermittently throughout the grape territory and sales are made largely through individual bargaining. Dense non-agricultural populations reside within short hauling distances of Ohio vineyards, and grape consumption in this area exceeds local production. Under these conditions marketing agreements offer little encouragement.

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1 U. S. D. A. - "Agricultural Adjustment, May 1933 to February 1934."

2 U. S. D. A. - "Agricultural Adjustment in 1934."

- (f) Advertising. Advertising may be classified into two categories: group advertising intended to bring about a general increase in consumption of eastern grapes, the advertisers hoping to share profitably in such increase; and individual advertising designed to divert purchasers from the grapes offered by others to those which carry the advertiser's brand.

Eastern grapes lend themselves poorly to either type of sales development. It is doubtful if consumption could be increased appreciably by this means, or buying diverted from offerings of one producer or group of producers to those of another.

Group advertising. Without control over or contributions from a material majority of the competitive supply of grapes being offered in the markets, the cost of this type of advertising would be out of all proportion to the benefits, if any, to be gained by the organizations and individuals participating. Other non-advertised grapes would share equally in any increase achieved in consumption without bearing any part of the cost. Unless greater benefits were secured through participation than through non-participation, advertisers would withdraw and refuse further contributions. It is difficult to see how such majority control could be achieved, nor how an advertising fund for eastern grapes could be raised to share the costs equitably. A national campaign to increase the consumption of apples a few years ago by this means did not succeed, and was abandoned.

Individual advertising. Grapes from many sources are equally satisfactory to most consumers of eastern grapes. Brand or state of origin has little to do with the sale. Premiums will not be paid unless for some real or fancied advantage in quality or usefulness. To convince consumers that such advantages exist in a particular brand of Concord grapes would be a gigantic task. Yet returns from the advertising expenditure would depend on purchasers paying more for the advertised brand or on their taking more of it, because of preference, than they otherwise would.

The customary baskets in which most Ohio grapes are sold are not well suited to labeling. Except on small unit-sale containers brands or other means of identification cannot well be carried through to ultimate consumers, without which consumer preference cannot be engendered or exploited. Attempts to alter the buying practices of large numbers of people to secure wide-spread acceptance of packages better suited to labeling would be expensive and slow in yielding results, especially in the case of grapes bought for making wine, juice or jelly.

Public announcements in trade journals to the wholesale and jobbing trade by shippers with large supplies to sell are more or less effective in maintaining contact with buyers. Individual grape growers with small acreages and other small shippers cannot hope to benefit as much from public announcements as from private correspondence with prospective customers. Again, concentration of supplies in the hands of a large organization permits more effective contact with buyers, by whatever means.

- (g) Market Information. Since in this territory many sales are made on farms and delivery of the grapes accepted by buyers there, knowledge of farm prices is important. Yet there is no organized continuous reporting service on farm prices of Ohio grapes. Though vineyardists may be well informed about delivered prices in midwestern and eastern cities, they have no way of knowing what prices are being offered and accepted at other farms in the same general area. This need was met in a rudimentary fashion in 1934 as described in Section 5.

Farm price reporting ought to be continued. It is not the normal function of the agencies which provided for the service in 1934, and probably cannot be continued by them. In any event, in the interest of uniformity and centralized control, it would be far more desirable to have it carried on by the federal market news service, as in other more concentrated producing areas. Reliable information is as essential to orderly marketing in deficit as in surplus areas.



APPENDIX

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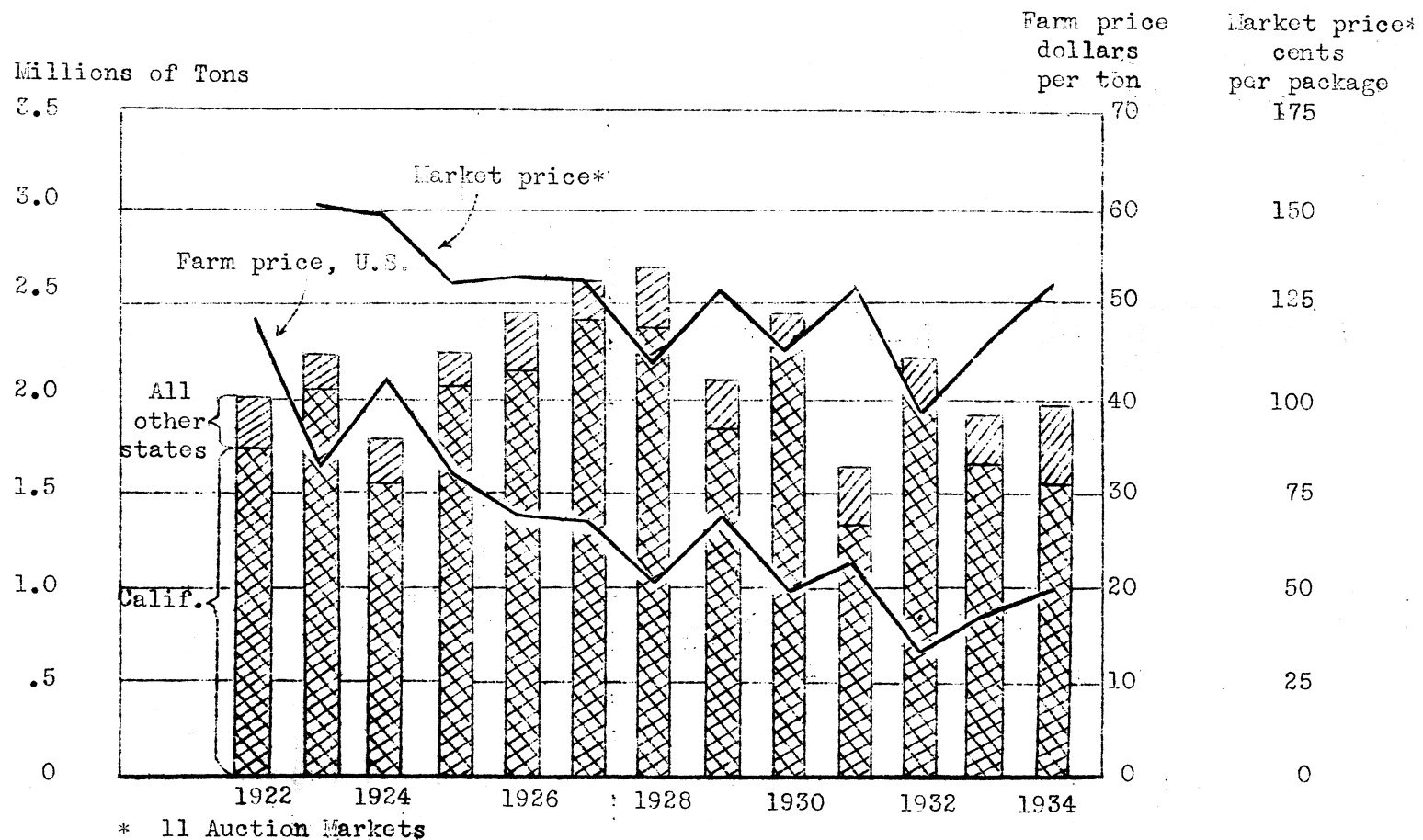
Additional Grape Statistics

United States and Ohio

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Prepared by

Department of Rural Economics  
Ohio State University



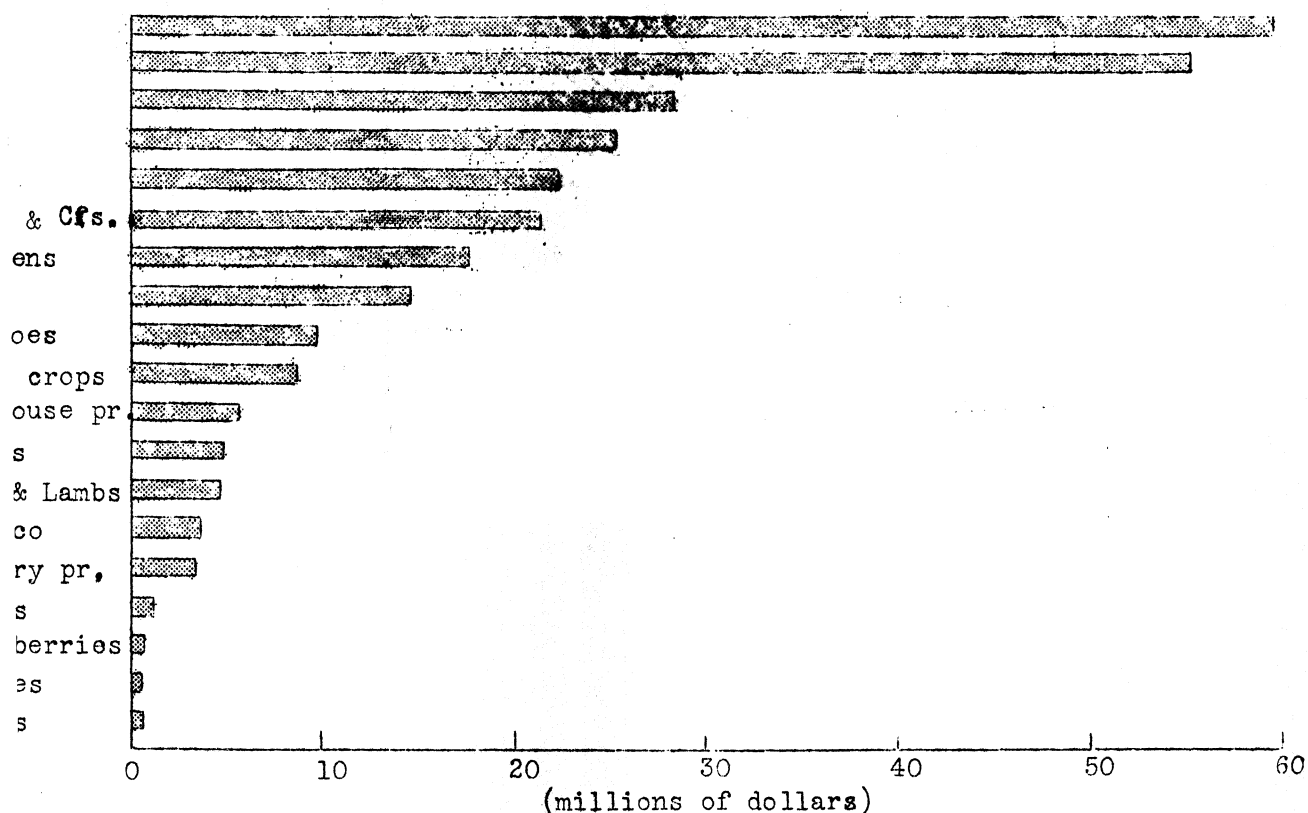
Grape Production, Farm and Market Prices\*

Farm Values of Agricultural Products in Ohio,  
1924-1934 <sup>1</sup>

(thousands of dollars)

| Product             | 5 year average<br>1924-28 | 5 year average<br>1929-33 | 1934<br>(preliminary) |
|---------------------|---------------------------|---------------------------|-----------------------|
| Apples              | 9236                      | 4951                      | 4234                  |
| Cherries            | -                         | 243                       | 146                   |
| Chickens            | 23503                     | 17575                     | 12469                 |
| Chicken Eggs        | 38678                     | 28202                     | 22106                 |
| Corn                | 107185                    | 59117                     | 72838                 |
| Grapes              | 1338                      | 822                       | 795                   |
| Greenhouse products | -                         | 5702                      | 5947                  |
| Hay                 | 37130                     | 22238                     | 28055                 |
| Livestock:          |                           |                           |                       |
| Cattle and Calves   | 24879                     | 21243                     | 14891                 |
| Hogs                | 75227                     | 55017                     | 33534                 |
| Horses              | 1698                      | 1188                      | 1451                  |
| Sheep and Lambs     | 7308                      | 4866                      | 4328                  |
| Mules               | 216                       | 90                        | 56                    |
| Nursery products    | -                         | 3352                      | 3397                  |
| Oats                | 32657                     | 14573                     | 12477                 |
| Peaches             | 2378                      | 842                       | 410                   |
| Pears               | 373                       | 258                       | 236                   |
| Potatoes (white)    | 14080                     | 9849                      | -                     |
| Small fruits        | 975                       | 549                       | 590                   |
| Strawberries        | 1336                      | 862                       | 940                   |
| Tobacco             | 5336                      | 3862                      | 2636                  |
| Truck crops         | 7166                      | 8596                      | 8635                  |
| Wheat               | 37366                     | 25178                     | 30729                 |

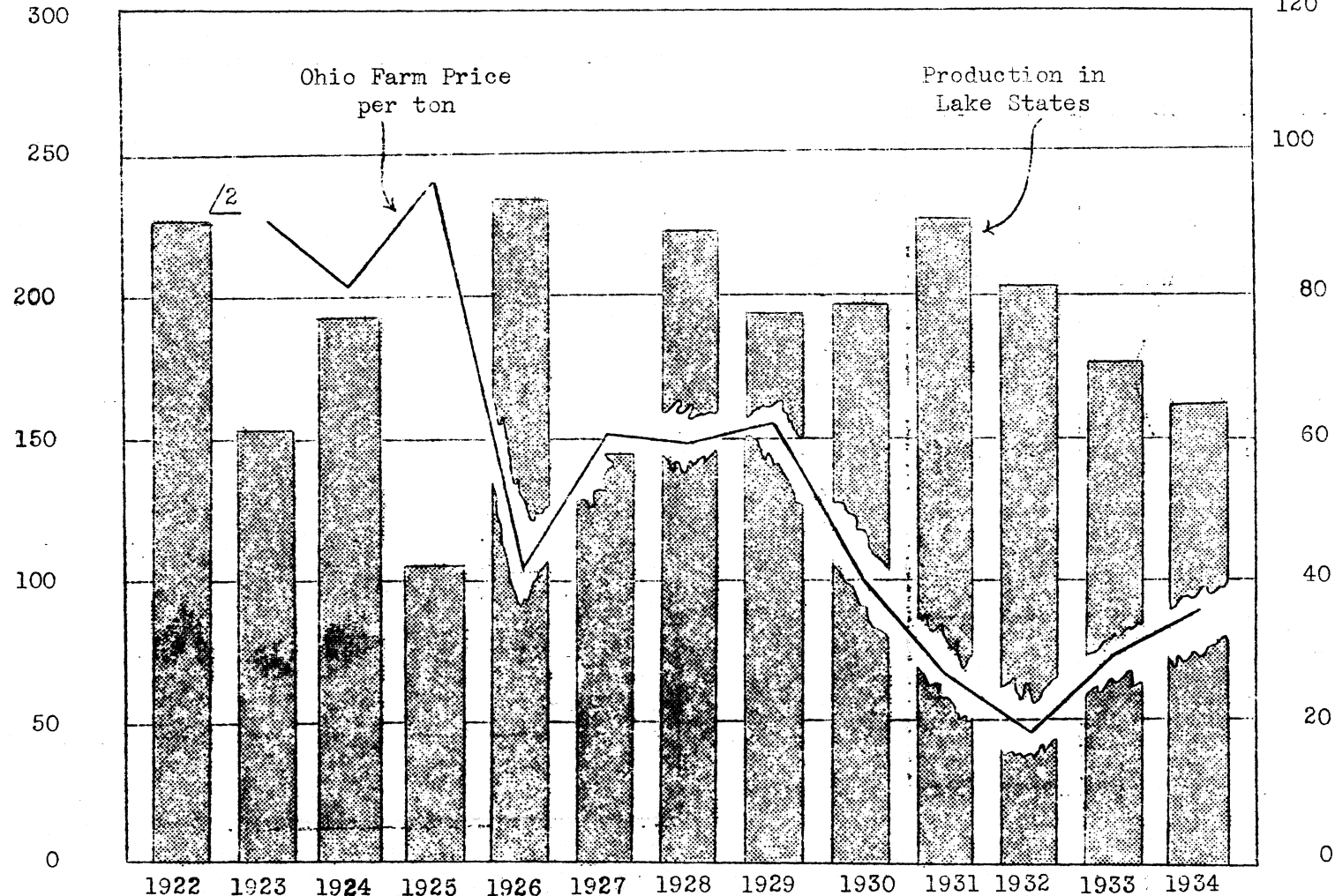
<sup>1</sup> U. S. Bureau of Agricultural Economics.



Grapes Ranked 19th in Value Among Farm Products in Ohio, Av. 1929-33.

Production  
Thousands  
of tons  
300

Farm price  
dollars  
per ton  
120



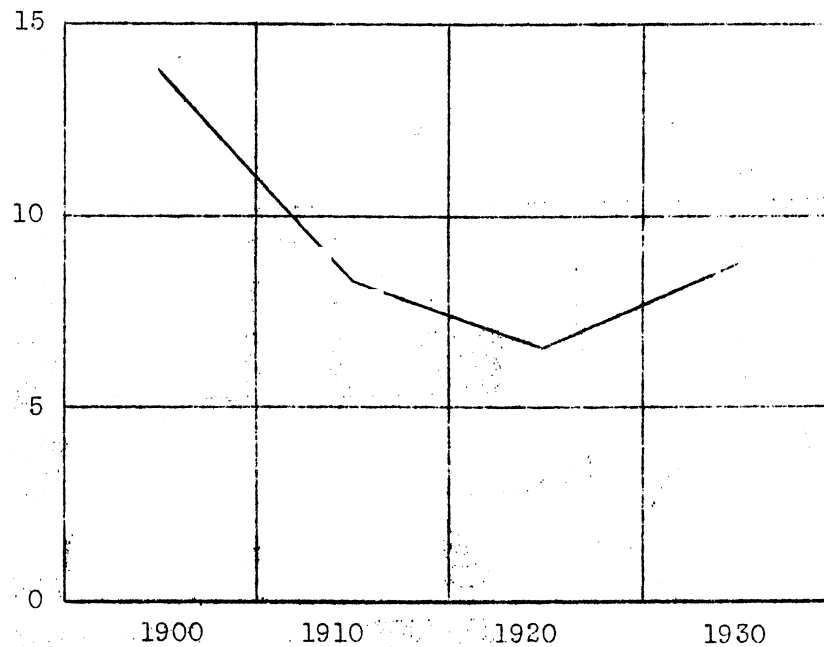
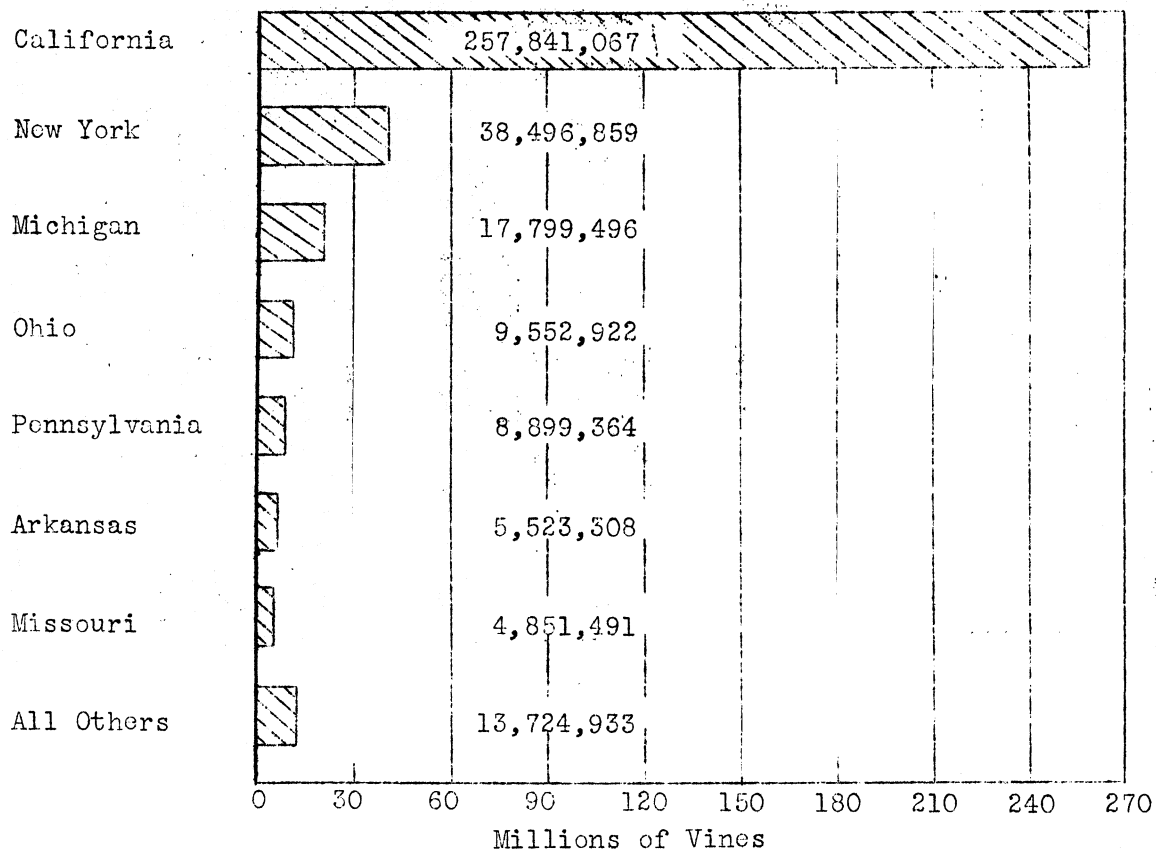
<sup>/1</sup> Includes Ohio, Michigan, Pennsylvania, New York, Indiana, and Illinois.

<sup>/2</sup> No Ohio Farm Price available for 1922.

Production of Grapes in the Lake States <sup>/1</sup> Compared to Ohio Farm Price, 1922-1934



Millions of Vines

Number of Vines of Bearing Age in Ohio  
1900-1930

Number of Vines of all Ages by States, 1930

Grape Production in the United States,  
by States and Areas

|                            | Average<br>1927-31<br>(tons) | 1933<br>(tons)   | 1934<br>(tons)   |
|----------------------------|------------------------------|------------------|------------------|
| Washington & Oregon        | 7,095                        | 7,525            | 7,778            |
| California - Wine          | *434,800                     | 420,000          | 446,000          |
| Raisin                     | **1,206,000                  | 970,000          | 799,000          |
| Table                      | *** 379,400                  | 270,000          | 299,000          |
| California total           | <u>2,020,200</u>             | <u>1,660,000</u> | <u>1,544,000</u> |
| Lake States, N. Y.         | 77,432                       | 64,800           | 49,400           |
| Pennsylvania               | 22,442                       | 17,808           | 18,981           |
| Ohio                       | 24,164                       | 27,412           | 22,720           |
| Michigan                   | 61,162                       | 58,562           | 61,145           |
| Ind. & Ill.                | 8,631                        | 8,576            | 8,470            |
| Total Lake area            | <u>193,831</u>               | <u>177,158</u>   | <u>160,716</u>   |
| Arkansas                   | 8,931                        | 12,120           | 16,640           |
| Missouri                   | <u>9,500</u>                 | <u>9,880</u>     | <u>7,540</u>     |
| Total U. S.                | 2,283,300                    | 1,909,600        | 1,775,200        |
| Grapes, fresh - net export | 18,463                       | (1) 9,458        | (2) 4,238        |
| Raisins, net export        | 80,224                       | (1) 57,065       | (2) 45,623       |

\* Includes wine grapes not harvested, 1928, 18,000 tons; 1930, 40,000 tons; 1931, 10,000 tons.

\*\* Includes raisin grapes not harvested, 1928, 60,000 tons; 1930, 319,000 tons.

\*\*\* Includes table grapes not harvested, 1927, 142,000 tons; 1928, 75,000 tons; 1930, 74,000 tons; 1933, 3,000 tons.

(1) Calendar year 1932.

(2) Calendar year 1934.

Production, Disposition and Value of Ohio Grapes  
1924-1934 <sup>1</sup>

| Year | Production<br>(tons) | Disposition                       |                                    |                                  | Farm<br>Price<br>(Dollars) | Gross<br>Value<br>(Thousands of Dollars) | Gross<br>Income | Cash<br>Income |
|------|----------------------|-----------------------------------|------------------------------------|----------------------------------|----------------------------|--|-----------------|----------------|
|      |                      | Loss,<br>Waste,<br>Etc.<br>(tons) | Home<br>Con-<br>sumption<br>(tons) | Sold<br>or<br>For Sale<br>(tons) |                            |  |                 |                |
| 1924 | 20,900               | 612                               | 5,600                              | 14,188                           | 65                         | 1,326                                    | 1,286           | 922            |
| 1925 | 14,550               | 275                               | 4,200                              | 9,275                            | 95                         | 1,306                                    | 1,280           | 881            |
| 1926 | 29,100               | 1,164                             | 6,720                              | 21,216                           | 40                         | 1,164                                    | 1,117           | 849            |
| 1927 | 20,650               | 600                               | 5,600                              | 13,800                           | 60                         | 1,200                                    | 1,164           | 828            |
| 1928 | 25,850               | 1,148                             | 6,720                              | 20,832                           | 59                         | 1,693                                    | 1,626           | 1,229          |
| 1929 | 14,121               | -                                 | 2,049                              | 12,072                           | 62                         | 876                                      | 876             | 748            |
| 1930 | 27,000               | -                                 | 3,415                              | 23,585                           | 40                         | 1,080                                    | 1,080           | 943            |
| 1931 | 31,000               | -                                 | 6,829                              | 24,171                           | 26                         | 806                                      | 806             | 628            |
| 1932 | 30,705               | -                                 | 6,829                              | 23,876                           | 18                         | 553                                      | 553             | 430            |
| 1933 | 27,412               | -                                 | 3,415                              | 23,997                           | 29                         | 795                                      | 795             | 696            |
| 1934 | 22,720               | -                                 | 2,049                              | 20,671                           | 35                         | 795                                      | 795             | 723            |

<sup>1</sup> U. S. D. A. Bureau of Agricultural Economics - "Farm Value, Gross Income, and Cash Income from Farm Production."

<sup>2</sup> Farm value relates to the evaluation of the total outturn of the given commodity, irrespective of use, whether sold, consumed by the farm family, or consumed in the production of further farm products on the farm where grown.

<sup>3</sup> Cash income relates to the value of quantities actually sold off the farms in the State where these were produced.

<sup>4</sup> Gross income relates to cash income plus the value of the products consumed in the farm household on the farm where the commodities were produced.

